EDUCATIONAL WRITINGS

There is usually little that is novel to comment upon in a new "method" or "system" of penmanship. One "method" uses copy slips, another copy sheets. One uses one style of alphabet, another a style the same in fundamentals, but different in a few minor details. One uses a slant of 55 degrees, another a slant of 60 degrees. And so one might extend the list of minor details of method which constitute the cornerstone of penmanship systems.

In *Penmanship, the Kirby Rhythmic Method*[1] there is more reason in the designation "method." Counting, or some method of indicating time, has been used in teaching writing for a long time and, in fact, is one of the important elements of most modern systems. The novel feature of the Kirby method is the grouping of the counts so as to bring the first count, which receives the accent, always on the first stroke of the letter. In this way each letter is marked off from the preceding and succeeding letters. The individual letters are characterized as written by two-part, three-part, or four-part time, according as they are given two, three, or four counts. Thus *i*, *e*, *a*, *n*, and *o* are written in two-part time, *m* and *w* in three-part time, and capitals *B* and *T* in four-part time. The announcement is made that the author has prepared phonograph records to keep the time for writing the various exercises.

Rhythm has been shown by experimentation to be an important characteristic of good writing, and this elaboration of the principles in teaching is a step in the right direction. The success of any such attempt will depend in large measure upon the choice of the correct rhythm for each letter or combination of letters. It seems to the writer that the time which is chosen for some of the letters is not the best. This is a question to which practical trial will give the answer.

F. N. F.

[1] *Penmanship, the Kirby Rhythmic Method.* By J. Albert Kirby. New York: Newson & Co., 1916. Pp. 133.

Under the editorial supervision of Professor Whipple three monographs have appeared dealing with the problem of formal discipline. The first of these[1] reports experiments on elementary-school children and refers to two problems that are of general educational importance. The first is the problem of formal discipline already referred to; the second is the problem of sense training. Dr. Wang gave a group of elementary-school children practice in the discrimination of vertical lines. He tested them before and after this practice in the discrimination of pitch, color, and size. He found that the transfer was very slight and that the amount of improvement recorded was very small. He then entered upon a second series of experiments in which he tested the ability of these same children to discriminate letters and to mark words containing various combinations of letters. Here he found the improvement to be very rapid, showing that the training of the senses as such is relatively slow and difficult, while the training of ability to use impressions received through the senses is very much more rapid. He also found that in this second case the transfer of training was very much more complete than in the first experiment. His conclusion is that transfer depends primarily upon the adoption of better methods of intellectual work and on the consciousness on the part of the subject that he is cultivating methods which can be transferred. In the first experiment the pupils did not know how to improve and they did not improve a great deal. Consequently transfer was very slight. This emphasis on the fact that transfer is not an absolute matter which takes places in the same degree for all sorts of mental functions has been coming out more and more clearly as experiments in psychology have gone forward. Transfer, like every other educational result, must be aimed at directly and must be consciously sought or it will not be achieved.

The second monograph[2] attacks the problems of formal discipline in the high school. We shall not attempt to go into the details of the investigation. They are very similar to the edu-

[1] *The General Value of Visual Sense Training in Children.* By Chang Ping Wang. Baltimore: Warwick & York, Inc., 1916. Pp. 85.

[2] *The Doctrine of Formal Discipline in the Light of Experimental Investigation.* By Nellie P. Hewins. Baltimore: Warwick & York, Inc., 1916. Pp. 120.

cational experiments that have been repeatedly tried in other fields. The interesting outcome in this particular case, however, is that, the experiments being more carefully and thoroughly worked out, the author discovers not only that the problem of discipline can be answered by such tests, but also that it is a matter of crucial importance to discover whether the pupils are themselves engaged in better methods of intellectual activity before or after the tests. Indeed, the comments of both the editor and the author are of significance. We quote therefore, first, a paragraph from Professor Whipple's introduction:

> Not long ago, as a result of the earlier experimental studies, it was felt by many that transfer of training was present either not at all or at least in such slight amounts as to be negligible. More recently, the pendulum has certainly swung in the other direction. Experimentation has been directed less toward searching for the existence of transfer than to searching for the kind of transfer present and the conditions under which it appeared. One factor in this shift of attack upon the problem as a whole has been the conviction that experimentation conducted upon children still in their formative years and under the more natural conditions of their everyday life might very well reveal the presence of formal training that could not be demonstrated with adults in the psychological laboratory.

Professor Whipple is undoubtedly right in saying that the important problem before us at the present time is not the mere determination of whether transfer takes place or not, but the determination of the conditions under which this transfer takes place.

After summarizing her results, Dr. Hewins makes the following statement, which is very significant because it gives a summary of the evidence in favor of transfer and also, in its last paragraph, points out with perfect clearness that intensive application is an important element in transfer. If this application is lacking, the results of the test will be of a type entirely different from those which are secured when it is present. The whole drift of these results, therefore, is to emphasize the method of intellectual procedure on the part of the pupil who is being tested.

> It is evident from these general summaries and comparisons that the practiced pupils have done better in the second and third series than the unpracticed. The question difficult to solve is: "What is the cause?" No doubt growth,

familiarity with procedure, benefits of classwork and study, and desire to excel, have all contributed their share toward the gain, but these factors may have aided both sides equally. We have no means of telling. Then why the difference?

Judging from the division of the practice groups, the better pupils in these tests were on the unpracticed side. While the class term marks showed the better boys to be on the unpracticed side, the contrary was true as far as the girls were concerned. The March rating showed the reverse condition of affairs. Very little significance can be attached to class marks as denoting general intelligence or superiority, because so many extraneous factors enter in.

Considering Table 3, we would naturally expect both practiced boys and girls to earn in the second series a bigger gain than their opponents in the biological tests; but how shall we explain their greater efficiency in the non-biological tests, other than to ascribe it to the effects of the practice series?

Feeling that the balance of arguments and scientific proofs was against formal discipline when this investigation was begun, I am forced by the results obtained to admit that in this experiment the proof seems to be on the affirmative side.

A valuable lesson, I think, can be drawn from one phase of this investigation. By consulting the tables and summaries, it will be seen that sometimes one division does not fall in line with the general trend, but that a larger number outweighs the negative and shows positive results. This would warn us against drawing conclusions from experimentation with too few subjects, as has been done in several of the investigations cited in the historical part.

As can be seen by the averages per test of Tables 2 and 4, the boys have done better than the girls, although the curves of the practice series seem to indicate that the girls are superior in that series. This may be ascribed to the boys' general lack of intensive application to uninteresting or monotonous work, but it is likely that greater effort was put into the shorter tests of the three series.

Finally, the third of these monographs,[1] prepared by Dr. Rugg, is significant for the general student of education quite as much because it deals with mature students as because of the positive results which it gives in regard to mental transfer. Dr. Rugg tested college students who were taking a course in geometry. His conclusions are summarized in the two quotations which follow:

The study of descriptive geometry (under ordinary classroom conditions through a semester of 15 weeks) in which such natural and not undue consideration is given to practice in geometrical visualization as is necessary for the solution of descriptive geometry problems operates:

[1] *The Experimental Determination of Mental Discipline in School Studies.* By Harold Ordway Rugg. Baltimore: Warwick & York, Inc., 1916. Pp. 132.

1. Substantially to increase the student's ability in solving problems requiring the mental manipulation of a geometrical nature, the contents of which are distinctly different from the visual content of descriptive geometry itself.

2. Substantially to increase the student's ability in solving problems requiring the mental manipulation of spatial elements of a slightly geometrical character, i.e., problems utilizing the fundamental elements of geometry (the point, line, and plane), but apart from a geometrical setting, and in such form as to offer no geometrical aids in solution.

3. Substantially to increase the student's ability in solving problems requiring the mental manipulation of spatial elements of a completely non-geometrical nature, i.e., problems in which the straight line and plane do not appear in any way whatsoever.

4. The training effect of such study in descriptive geometry operates more efficiently in those problems whose visual content more closely resembles that of the training course itself, i.e., in those problems whose imagery content is composed of combinations of points, lines, and planes, and *in which the continuity of the manipulating movements approaches the continuity of those in the training course.*

The possibility of one "disciplinary outcome" in a specific school subject, i.e., ability in the mental manipulation of spatial elements, has been established in this investigation. The writer believes that formal school subjects find a large part of their disciplinary value in the developing of this ability to analyze the problem and to organize a method of procedure; to build up ideals, or to organize a method of attack. But it is undoubted that they also make habitual, or automatic, many specific constituents of the complex abilities that function in many complex situations. The successful habitualizing of these specific reactions is accentuated by the building up of a background of fundamental attitudes of orientation, or familiarity with the content of the situations to be met. It may be increased by the accompaniment of practice in extending the range of attention.

Taking together the three studies which have been thus briefly summarized, there can be very little doubt that the evidence which they furnish contributes very emphatically to a view with regard to formal discipline which is probably much more wholesome than the earlier view or the reactionary view which has been common in recent years. It is not true, as some are supposed to have believed a generation ago, that training in a given subject spreads equally in all possible directions; nor is it true that training in a given subject is incapable of influencing other facts in mental life. The whole problem is one of right methods of intellectual procedure. The training which is derived from any given subject will depend quite

as much on the adoption of right intellectual methods as upon the subject-matter of training. Desirable training does not issue automatically from all kinds of school work, but it shows itself just in the degree in which intellectual work has been carefully planned and carried out according to productive methods. The problem for the practical teacher, therefore, as well as for the student of educational principles is to discover those methods of training which shall contribute to transfer rather than to assume that transfer is present or to deny that it can take place.

Judging from the eagerness exhibited in all quarters for information about the junior high school, there will be a wide circulation for two pamphlets[1] which have recently been issued. The first of these is a statement in brief of the historical background of the junior-high-school movement, of the defects in our present system of organization, of efforts directed toward improvement, of arguments for and against the new institution, and so on. There is a bibliography at the end. There is a statement of the kind of curriculum which such a school should adopt. The pamphlet, as indicated in the footnote, is issued as a bulletin of Middlebury College and can be had by addressing the college.

The second pamphlet evidently has as its chief purpose a definition of the junior high school. The statements of various authorities are quoted and prominence is given to the following definition:

> A Junior High School is a school made up of the upper grades (usually the seventh and eighth) of the elementary school and the lowest grade (the ninth) of the secondary school, and organized after the general plan of the secondary school as regards curriculum, nature, and method of the recitation, instruction, and supervision.

It is the belief of the writer of this note that the time has not yet arrived for formulating a definition of the junior high school. The school systems of this country are in a period of experimental readjustment. Let the experiment go forward. There are many observers who are restless because everything seems to be unformed

[1] *The Junior High School.* By Frank E. Howard. Middlebury College Bulletin, September, 1916. Pp. 43.

The Junior High School. By Ernest P. Wiles. Boston: D. C. Heath & Co., 1916. Pp. 24.

and chaotic. There is, to be sure, some ground for anxiety in the fact that some schools have seized on the name, but are empty and formless in substance. There will be overradical systems where the change in the seventh and eighth grades will be made without due consideration of all that is involved. But out of this kind of experimentation a democracy issues with all its new products. We must be patient and not settle on final definitions until we have tried many different modes of adjustment. The present pamphlet should not be taken too seriously as a definition. It is rather one of the preliminary arguments in favor of a certain type of organization. The institution for which it argues appears as one among many different types of junior high school.

The annual report of Superintendent Bliss[1] contains two items of general importance which raise it above the level of ordinary interest. For four years Mr. Bliss has kept a careful record of the health in open-air schoolrooms and in ordinary rooms. His results and conclusions are stated in the following quotation:

> In the report of last year were given certain facts with respect to open-window classes, indicating that the assumptions which had been made of their value were not justified, but the experiment was continued for another year, and the records of three classes operated on the open-window plan were checked by those of three control classes. The results appear in the accompanying tables:
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> If these facts are compared with those given in the 1915 report, it will be seen that they point to the same conclusion, namely, that children in well-ventilated rooms maintained at a normal temperature are actually in better health than those in low-temperature rooms. When a test is carried on for four years with different grades and in different buildings, and when the results, without exception, point to the same conclusion, there seems no escape from that conclusion. Accordingly, no open-window classes will be maintained during the coming year.

The second matter worthy of comment is the careful analysis which is made of the increases in population in the various districts of the system for a period of more than forty years, with a view to

[1] *Report of the Board of Education of Montclair, N.J., for the Fiscal Year Ending June 30, 1916.* Pp. 68.

determining the policy of the city in its future program for the distribution of school buildings. The study makes it possible to lay out a program for the system looking forward as far as 1940.

In many communities such a program would be invalidated by the changing conditions which cause fluctuations in the distribution of population, but it is more than likely that school boards would find their plans justified rather than overthrown in a

HEALTH RECORD, 1915–16

	II. Open Window		II. Control Class	
	No. Children	Days Absent	No. Children	Days Absent
Colds, etc.	23	176	19	127
Indigestion	5	8	6	9
Contagious diseases	1	14	0	0
Other causes	24	148	25	137
	III. Open Window		III. Control Class	
	No. Children	Days Absent	No. Children	Days Absent
Colds, etc.	26	128	12	89
Indigestion	20	46	4	5
Contagious diseases	3	19	1	28
Other causes	24	120	13	70
	IV. Open Window		IV. Control Class	
	No. Children	Days Absent	No. Children	Days Absent
Colds, etc.	26	113	22	72
Indigestion	7	20	13	20
Contagious diseases	0	0	4	44
Other causes	27	127	25	106

great majority of cities if careful studies like this were made. Telephone companies have long since given up building their trunk lines on mere guess. They make surveys of the population. These surveys go into such details as the probable class of homes or business houses that will be located in various sections. Mr. Bliss's study illustrates the application of progressive, scientific methods to the solution of social problems.

Greene County is in southwestern Indiana. A survey[1] of this county was made and reported as a thesis for the Master's degree in education at Indiana University.

The survey reports general facts regarding the county as ascertained from the census and from the histories of the county. It reports on buildings, equipment, training of teachers, ages and progress of pupils, and courses of study on the basis of answers collected from school officers to series of questions sent out by the author of the thesis.

The method of comparison is employed in bringing out the characteristics of different towns. One has a high average attendance of those enrolled; another is much lower.

Descriptive summaries are given in many matters, as indicated in the following quotations:

Water is supplied to 33 per cent of the schools by open springs, 64 per cent are supplied by wells, and 3 per cent by cisterns. Very few schools, less than 4 per cent, have had the water tested recently. Very little precaution is taken to prevent the contamination of the water either in the springs or in the well.

In 10 per cent of the cases the supply of water was located on the school ground, 50 per cent had water less than one-fourth of a mile away, while 40 per cent had to carry water more than one-fourth of a mile. Forty-seven per cent of the schools use the common drinking cup, 51 per cent reported individual drinking cups, and 2 per cent fountains.

Only 15 per cent of the schools were using paper towels, while in 33 per cent of those using cloth towels the teachers reported them as in an unsanitary condition. The percentage was probably greater.

There were not any trees on 25 per cent of the grounds, 25 per cent had fewer than four trees each, and the other 50 per cent had four or more trees each. Many of the schools have been established for many years, yet do not have a tree near. There is no reason why all should not have good shade trees, since they may be had for the effort of planting and caring for them. In many places they are needed badly.

There were 172 teachers in the grades of the township schools in 1914–15. Of these 74 per cent were high-school graduates and all of them had had twelve or more weeks of professional training, 35 per cent had had more than twenty-four and less than thirty-six weeks, and 35 per cent had had more than thirty-six weeks of college or normal training. During the same year the towns and cities had 61 grade teachers, 70 per cent of whom were high-school graduates. Fourteen per cent had had less than twelve weeks of college or

[1] *Educational Survey of Greene County, Indiana.* By Daniel C. McIntosh, Worthington, Indiana. Pp. 110.

normal training, 28 per cent had had between twelve and twenty-four, leaving 58 per cent with thirty-six or more weeks of college or normal training.

The survey is deficient in one most important respect. There are no tests which show the character of work done by the pupils. The result is that the survey is blind in its recommendations so far as these relate to the actual work of the classroom. The author, furthermore, makes the mistake of not recognizing this limitation and makes recommendations on matters which are not otherwise covered in his survey. For example, he includes in his final list of recommendations the following paragraph:

> The schools are attempting to teach too much and not giving enough time to the essentials. More time is needed in language work to the fundamentals and more simple forms of expression. Teach the fundamentals in arithmetic better, but vitalize it by connecting the work with everyday problems, not being afraid to omit some of the work in the cube root, complex fractions, and some of the other useless things. Mental training can come from the more simple and practical things as well as from the more complicated and impractical problems. The first-hand problems of every farm and home should form a part of each school curriculum.
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> The teaching of reading could be improved in many of the schools. Reading should come from a desire to know or find out something and it could come from a desire to know more about nature much easier than from something less familiar. The desire to know will help keep the interest in phonics, word drills, and discussions, which must come before good oral reading. While it is not expected that all become good oral readers, more satisfactory results would come if the mechanics and thought were mastered before attempts were made to read orally.
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> The same might be said of spelling. Too many words are attempted and as a result not even the most common ones are mastered. Too many teachers assign the next ten words, then examine the children on them next day and pass to the next ten. No attempt is made in many schools to teach the children how to spell or to study the uses and relations of words. Words that are of use should be emphasized and time given to make each a part of the child's vocabulary.

The Iowa State Teachers' Association has issued a pamphlet[1] in which the work of its committee on the elimination of unnecessary subject-matter in the school curriculum is discussed in some detail for each of the subjects of the course of study. This Iowa com-

[1] *Report of the Committee on Elimination of Subject Matter.* Published by the Iowa State Teachers' Association, 1916. Pp. 52.

mittee is directly related to the committee of the National Education Association which has been working on economy.

The report in hand deals in specific details for each of the subjects and gives in every case a brief bibliography of discussions on each of the school subjects. The pamphlet is suggestive in that it deals thus specifically with the school problems.

A series of publications giving the courses of study in various cities indicates that there is a great deal of activity in school systems in the reorganization of the various subjects of instruction. From Sioux City there comes an elaborate volume[1] of 256 pages which outlines a course in history for the grades. This course begins at the beginning of the child's school experience. It includes a body of material which could in the earlier years be classified under either geography or nature study quite as well as under history. For example, the first topic to be dealt with is family life. Something about the organization of the home and the various people who are concerned in home life is taken up for the purpose of enlarging the experience of these beginners.

The conception of history which is implied in such a beginning of the historical course is the broad social conception which will ultimately lead in the later years of the course to a treatment, not only of the political history of the country, but also of its industrial history. Throughout the pages of the volume this spirit finds frequent expression.

The course in history, as outlined, is much more elaborate than that followed in most elementary schools. There is a large amount of material which refers to ancient history and to the mediaeval period which ordinarily is not touched upon in elementary-school work. For example, to take a single item, routes of trade among the mediaeval nations are discussed with some reference to their geographical correlation.

The book is illustrated by half-tones of dramatic representations, which were worked out in the course of the study by the children in the various grades. This dramatization of history was exhibited before certain teachers' associations and the children were thus

[1] *Progress.* Print Shop: Ye Highe Schoole, Sioux City, Iowa, 1916. Pp. 256.

helped to make vivid their ideas of each of the different periods covered in the course.

There can be no doubt that the elementary course is at the point of enlargement so as to include more of the type of social material which is here given in detail. The question of adjusting the rest of the course of study so as to include this material will suggest itself to many readers as constituting an obstacle to the adoption of a course of this kind. It is, however, perfectly clear that obstacles of this type ought to be removed in order to bring into the curriculum this highly interesting social material. Children are interested in this type of work and they gain enormously in breadth of experience. The material also furnishes an opportunity for contact with books of reference and for the cultivation of the imagination as well as for training in routine of reading which makes it much more productive than the formal material which has in many cases served for the reading class and for study in the elementary grades.

A second contribution[1] to the study of the curriculum is a summary from the Wichita public schools of the elementary courses in various subjects. English is treated in a separate pamphlet much more elaborately than the other subjects. A very brief outline pamphlet gives an account of what is to be done in these schools in history, geography, community civics, and nature study. No special comment needs to be made on this composite pamphlet. It is merely a skeleton outline of the course. A bibliography is furnished for the various subjects which will be useful to teachers.

The English course is very much more detailed and will be welcomed by elementary teachers because of its rich body of references of reading material. One gets the impression as he reads through the course of study that the reading material which has been selected has back of it no fundamental principle of selection. Undoubtedly the experience of elementary teachers has operated to eliminate

[1] *Elementary Course of Study in English for the Wichita Public Schools.* Published by the Board of Education, 1916. Pp. 172.

Elementary Courses of Study in History, Geography, Community Civics, and Nature Study for the Wichita Public Schools, 1916. Pp. 67.

many of the selections which have been tried and have been found to be too mature or too complicated for the use of the different grades. From the point of view of a new teacher, or especially from the point of view of one outside of a school system, it would seem highly desirable that courses of study should discuss sufficiently the principles of selection which are adopted in these courses, so that the teacher who wishes to depart in any measure from the prescribed routine in the course will know how to go about the collection of reading-matter that will comport in character with the reading-matter suggested. Not only ought courses of study, therefore, to lay down the routine that is to be followed, but for the sake of the system which is to use such course of study, it would seem advantageous to discuss briefly the principles of selection and presentation.

Such a criticism as this is offered, not because the Wichita course in English is a conspicuous example of failure to comply with this demand for a statement of general principles, but because an elaborate course of this type will pass through many hands and will undoubtedly influence the organization of similar courses in other cities. If there is to be genuine co-operation in the building up of such courses, such co-operation will require a clear background of theory.

Judging from the number of books which have recently appeared for the use of parents, there must be a very widespread interest on the part of intelligent parents in the needs of their children. Indeed there can be little doubt that a number of the movements of reform in modern education have spread rapidly just because there is an intelligent reading public which is outside of the schools themselves. The addition of another volume intended for this intelligent reading public is therefore a matter of interest to school officers as well as to the parents to whom the book is addressed.

The volume on *Sons and Daughters*[1] is written in a concrete, vivid style, with many illustrations and striking phrases. It brings out the general principle of individual differences in a very impressive

[1] *Sons and Daughters*. By Sidonie Matzner Gruenberg. New York: Henry Holt & Co., 1916. Pp. 328.

way. It calls attention to a number of the topics that have been made subjects of special discussion in recent years. For example, there is a chapter on children and money which reminds one of Professor Kirkpatrick's volume on this subject, and which stimulates thought with regard to this important phase of education which is not ordinarily provided for in the school. There are chapters on the cultivation of hobbies, children's parties, keeping of pets, and various forms of punishment that are suitable. Spencer's principles of punishment and justice to children are again discussed, but in a fashion which undoubtedly will leave an impression on the mind of the untechnical reader which Spencer's discussion never has an opportunity to make.

The book is one which can be recommended to parents' associations and mothers' clubs as well as to individual parents who are interested in keeping up with educational movements.

The Argentine Republic has prepared a little volume[1] describing and illustrating the various resources of that country. This volume is prepared in connection with the Panama-Pacific Exposition and can be secured by addressing the Commission of the Argentine Republic at San Francisco.

In short compass this volume gives material which will serve admirably as supplementary reading for a geography class dealing with South America. There are some very good pictures in the book, and the reading-matter is in a style which would be intelligible to children in the grades as well as to adults who may be interested in getting better acquainted with this South American republic.

[1] *The Argentine Republic*, 1915. Pp. 88.